



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,415	11/28/2003	Visvesvaraya A. Pentakota	TI-36970	7397

23494 7590 01/10/2006

TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265

EXAMINER
----------

CHO, JAMES HYONCHOL

ART UNIT	PAPER NUMBER
----------	--------------

2819

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/722,415

Applicant(s)

PENTAKOTA ET AL.

Examiner

James Cho

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 19-21, 39-44 and 48 is/are rejected.
- 7) ☒ Claim(s) 2-18, 22-38, 45-47 and 49-53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Receipt is acknowledged of the Amendment filed 10-24-2005.

#### ***Claim Objections***

Claims 7, 16, 27 and 36 are objected to because of the following informalities;

The wording, "a voltage adjusting block" in claims 7, 16, 27 and 36 appears to be --said voltage adjusting block-- respectively.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 21, 41-42, 44 and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Eichfeld et al. (US PAT No. 6,777,974).

Regarding claims 1, 21, 44, and 48, Figs 1 and 3 of Eichfeld et al. teaches an integrated circuit, a device, an apparatus or a method of processing a transition from a first value to a second value (output of 90 changes; col. 9, lines 11-19) where the first value is not equal to the second value (low portion of the output signal is different from high portion) comprising: an output buffer (90) receiving the first value followed by the second value (receives the Driver input signal pulse comprising of low and high portion),

Art Unit: 2819

wherein the first value is not equal to the second value; and a voltage adjusting block (driver strength selector 51) to determine a total strength to be applied to the output buffer (output signals of 51 determined the total strength of 90 by enabling selected 91), a control block (20, 30, 40, 50 in Fig. where 50 provides control signal to 51 to adjust slope times, i.e. changes the driver strength based on the comparison) changing a strength of the output buffer gradually while the output buffer provides the second value as a buffer output (slop variation inherently changes the strength of the output buffer gradually as slew rate gets slower).

Regarding claim 41, Figs. 1 and 3 of Eichfeld et al. teaches the device of claim 21 where the device further comprises a load receiving the buffer output (output of 90, 93, is be outputted to a load capacitance, 12 via a transmission line in Fig. 1).

Regarding claim 42, Figs. 1 and 3 of Eichfeld et al. teaches the device of claim 41 where the load comprises a transmission line (the transmission line between 90 and 12 is inherently regarded as a load in Fig. 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-20, 39-40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichfeld et al..

Regarding claims 19-20 and 39-40, Figs. 1 and 3 of Eichfeld et al. teaches the integrated circuit of claims 1, 21, 41-42, 44 and 48 as discussed above where the desired slope times being preset by a user (col. 4, lines 47-55) except for specific slope rate being more than 15% of a clock cycle duration or equaling to at least 40%. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the slope rate to be more than 15% or at least 40% based on the user's application, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 43, Figs. 1 and 3 of Eichfeld et al. teaches the device of claim 21, but does not disclose the device comprising a wireless base station, an antenna receiving an external signal and an analog processor processing the external signal to generate the first and the second value. However, the limitation is merely intended use of the device recited in claim 21 and it has been held that a recitation directed to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

***Allowable Subject Matter***

Art Unit: 2819

Claims 2-18, 22-38, 45-47 and 49-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The statement of reasons for the indication of allowable subject matter was communicated in the Office action mailed 6-28-2005.

### ***Response to Arguments***

Applicant's arguments filed 10-24-2005 have been fully considered but they are not persuasive. In the Office action mailed 10-24-2005 has indicated the allowable subject matters if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, the applicant has failed to include all of the limitations of intervening claims, which proceeded by the allowable claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

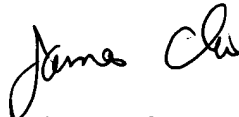
Art Unit: 2819

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James Cho  
Primary Examiner  
Art Unit 2819

12-29-2005